

A PRELIMINARY LIST OF THE PROCTOTRYPOID  
HYMENOPTERA OF WASHINGTON, WITH  
DESCRIPTIONS OF NEW SPECIES.\*

BY CHARLES T. BRUES.

On account of its large extent and varied life conditions, the State of Washington supports an unusually interesting fauna. So far it has received but scant attention from entomologists in comparison to that which has been bestowed upon most other parts of the United States, and it offers an almost virgin field for the student of many groups of insects. During a part of the past summer I had the good fortune to enjoy the hospitality of the Puget Sound Marine Station, located among the islands of Puget Sound in the extreme northwestern part of the state. While there I had the opportunity, through the kindness of my friend, Professor A. L. Melander, to examine a collection of parasitic Hymenoptera, obtained principally in the country surrounding the site of the laboratory and on the slope of a nearby mountain about 2,500 feet in height.

I have worked over only the material representing the superfamily Proctotrypoidea, and although it contains but a small number of species from a very restricted region, it nevertheless more than trebles the number of recorded forms of this group known from the state. I have therefore included for mere convenience such other records as I have been able to gather from published and other sources relating to Washington.

The Proctotrypoidea will undoubtedly be found to be well represented in the state when carefully collected, especially in the Humid Transition Area, where the present material was obtained. One genus, *Proctotrypes*, seems indeed to reach its highest development there, to judge from the extensive series of species which are contained in the collection.

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one-third longer than wide when viewed from above. When seen from the side it is nearly triangular, with the face very strongly reflexed. Vertex and front above antennæ smooth and highly polished. Face long, gradually narrowed below, its surface faintly punctulate. Eyes small, round, bare; separated from the posterior margin of the head by more than their own diameter. Ocelli in a triangle, the median one farther anterior to the lateral ones than the distance separating these from each other. Mandibles and palpi ferruginous. Antennæ 13-jointed, as long as the head and thorax, and much thickened. Scape stout, about two and one-half times as long as thick; pedicel minute; first and second flagellar joints of equal length, about twice as long as thick, and each three-fourths as long as the scape; following joints growing shorter, after the sixth quadrate, the last longer, acute at the tip; in color they are ferruginous at the base, shading into black near the middle of the flagellum. Thorax unusually narrow, metanotum and scutellum smooth, polished; the latter with a depression across the base, and more strongly elevated medially than is usual. Metanotum slightly longer than high, rather abruptly declivous behind; its surface finely rugose, above with a faint median carina, not extending on to the posterior slope, surrounded by a more nearly smooth area. Pro- and mesopleuræ polished, smooth; tegulæ testaceous. Abdomen shining black; petiole rugose, broader than long; second segment striate only at the extreme base. Cauda short, scarcely longer than the hind metatarsus, with an unusually slender, acute tip. Legs yellowish brown; hind coxæ black; inner spur of hind tibia one-third the length of the metatarsus. Wings hyaline, with no indications of discoidal veins; stigma piceous; marginal cell one-half as long as the stigma; radial vein fuscous.

Described from one female specimen collected on the slope of Mount Constitution on Orcas Island, San Juan Co., Wash.

The head is more elongate in this species than in any other member of the genus which I know. It approaches most closely to two Canadian species described by Ashmead, *longiceps* and *canadensis*, but can be readily recognized by the shorter antennal joints, longer head, and different metathoracic characters.

***Proctotrypes placidus* sp. nov.**

Male. Length 6 mm. Smooth, black, highly polished; legs except base of coxæ ferruginous. Wings slightly infuscated. Head trans-

verse, twice as broad as long. Vertex and front shining, impunctate; between the antennæ with a median raised line which extends almost to the clypeus. Face faintly punctulate with a longitudinal depression on each side of the median elevation. Eyes oval, bare, broader than the temples. Ocelli in a triangle which is much broader than high. Mandibles and palpi fuscous. Cheeks impunctate. Antennæ 13-jointed, considerably longer than the head and thorax together; stout, entirely black, joints 2-8 of flagellum each with a tooth-like projection at the middle of the upper side. Scape stout, twice as long as thick, pedicel minute; first flagellar joint about four times as long as thick, not dentate or toothed; second and each following joint somewhat shorter, but very slightly so, and gradually more slender; last joint very little longer than the penultimate, very slender with acute apex. Mesonotum shining slightly fuscous pubescent like the head. Scutellum broad, evenly convex, with a transverse depression at the base. Metathorax nearly twice as long as high; angulate, not curved at the upper edge of the posterior slope when seen in profile; its surface entirely coarsely rugose-reticulate, except above where a large shield-shaped much smoother area is formed by two lateral carinæ which meet behind. This area is divided by the usual median carina which however does not continue on the posterior slope. Pro and mesopleuræ smooth; polished; tegulæ ferruginous. Abdomen as long as the head and thorax; petiole as long as broad, coarsely fluted; second segment with a few coarse deep striæ at the base; apical spines black. Legs bright ferruginous except the bases of the coxæ which are black, especially on the posterior pair. Femora slender, inner spur of posterior tibia not quite one-half as long as the metatarsus; all tarsal claws simple. Wings quite distinctly infuscated, with the discoidal veins very distinctly indicated by brownish streaks; stigma, except upper half, and radial vein very dark fuscous; marginal cell petiolated, less than one half as long as the stigma.

Described from a male collected on Mount Constitution, Orcas Island, San Juan Co., Wash., July 31, 1908 (A. L. Melander).

Allied to *californicus* Holm, but separable from this and other species with dentate flagellar joints by the large divided shield-shaped area on the metathorax.

***Proctotrypes obscuripes* sp. nov.**

Male. Length 4 mm. Entirely black, with the base and tips of the femora and part of the tibiae and tarsi honey-yellow. Head trans-

verse, barely twice as wide as thick, its surface smooth and polished except for a faint punctulation on the face. Front between the antennæ with a short median carina which extends for a slight distance down the front. Eyes oval, bare; ocelli in a broad, transverse triangle. Antennæ 13-jointed, entirely black; distinctly longer than the head and thorax. Scape twice as long as thick, shorter than the first flagellar joint; second a little shorter than the first; following subequal but very gradually shortening; apical joint longer. First five flagellar joints dentate above, also sometimes less distinctly so to the sixth and seventh. Mandibles piceous, palpi fuscous. Mesonotum shining, with sparse pale grayish pubescence. Scutellum sharply convex, with a transverse depression at its base. Metathorax finely rugose reticulate, with a median carina extending entirely to the tip; above with a smoother space, but without any lateral carinæ. Metathorax, viewed from the side, about one-half longer than high and evenly arcuate above. Pro and mesopleuræ smooth and shining. Tegulæ ferruginous. Abdomen shining black; petiole a little broader than long, longitudinally fluted; second segment with a few coarse striæ at the base, longer medially. Spines at tip of abdomen black. Legs, including coxæ, black or piceous; bases and tips of femora and tibiæ, except darkened spot medially, honey-yellow. Wings hyaline, without trace of any discoidal veins; stigma and nervures piceous, marginal cell petiolated, one-third the length of the stigma.

Described from two males collected on the islands in Puget Sound, Wash., one on the slope of Mount Constitution on Orcas Island.

This species is most closely related to the following species, from which it may be most easily separated by the different color of the legs.

***Proctotrypes serricornis* sp. nov.**

Male. Length 4.5 mm. Entirely black; legs, except coxæ, ferruginous. Head transverse, not quite twice as broad as thick, quite strongly narrowed on the temples behind the eyes. Front with a slight median carina between the antennæ. Surface of the head smooth, except the face which is punctulate and furnished with a median longitudinally convex central elevation, on each side of which at the base of clypeus are two unusually well pronounced foveæ. Mandibles and palpi piceous. Eyes bare, oval, separated by less than their diameter

from the posterior margin of the head; ocelli in a small, transverse triangle. Antennæ three-fourths the length of the body rather thickened basally, 13-jointed; basal eight joints of the flagellum each with a sharp tooth above, and the ninth with a less distinct one. Scape scarcely twice as long as broad and quite distinctly shorter than the first flagellar joint; following flagellar joints very slightly decreasing in length more distinctly so near the base; apical joint nearly one-half longer than the penultimate; the first joint about three times as long as thick at the apex and the second about the same. Thorax rather slender, especially in front; mesonotum shining, very slightly pilose; scutellum strongly convex, the transverse depression at its base broad and deep. Metathorax nearly twice as long as high, sharply rounded behind; its surface coarsely rugose reticulate; with a smoother space above near the base; median carina very short, a lateral one on each side indicated at the extreme base. Pleuræ smooth and shining; mesopleura behind with a crenate margin. Tegulæ dark ferruginous. Abdomen as long as the head and thorax; petiole coarsely longitudinally striated; second segment with a row of very short striæ or pits at the base; apical abdominal spines large, black. Legs slender, ferruginous, the four posterior coxæ, and the base of the anterior ones black. Inner spur of posterior tibia one-half the length of the slender metatarsus. All tarsal claws simple. Wings subhyaline, slightly brownish, with faint traces of discoidal veins. Stigma and veins piceous, the marginal cell scarcely one-fourth the length of the stigma.

Three specimens, two from the slope of Mount Constitution on Orcas Island, San Juan Co., Wash., and the other from one of the islands in Puget Sound without further data. All were collected during July.

This species is distinguishable by its dentate first flagellar joint and by metathoracic characters.

#### **Proctotrypes simplicior** sp. nov.

Male. Length 2.5—3.5 mm. Black, legs except coxæ reddish yellow or dull ferruginous. Head transverse, two and one-fourth times as wide as thick; smooth and shining black, but quite noticeably pubescent. Front with a very slight short carina between the antennæ; face evenly and but little convex. Mandibles and palpi piceous. Eyes bare; oval, separated by their own width from the posterior margin of the head. Antennæ 13-jointed, about four-fifths as long as the



body; filiform, none of the flagellar joints toothed or dentate; scape much narrowed basally, twice as long as thick at apex; flagellar joints long cylindrical and gradually decreasing in length to the penultimate, all of the joints between four and five times as long as thick; last joint one-third longer than the penultimate. Mesonotum elongate, very strongly narrowed anteriorly. Scutellum very highly convex, with a deep broad depression at its base. Metathorax one-half longer than high; finely rugose-reticulate; above smoother centrally near the base, with a median carina which extends nearly to the insertion of the abdominal petiole. In profile the metathorax is arcuate above, more sharply bent at the upper part of the posterior slope. Pleuræ shining black; tegulæ brown. Abdomen nearly as long as the head and thorax; petiole as broad as long, finely rugose; base of second segment with a series of extremely short, more or less irregular longitudinal grooves or pits; remainder of abdomen shining black; the apical spines prominent, black. Legs reddish yellow or dull ferruginous; the coxæ black, except the tips of the four anterior ones; femora slender; claws simple; inner spur of hind tibia not quite half as long as the metatarsus. Wings hyaline, without trace or with scarcely distinguishable discoidal veins; stigma piceous, three times as long as the petiolate marginal cell.

Six specimens, all from the Puget Sound region; three collected on the slope of Mount Constitution on Orcas Island, San Juan Co., Wash.

This species approaches most closely the common eastern *P. abruptus* Say., differing by its longer antennæ, composed of much more elongate joints, and its entirely different metathoracic sculpture.

#### Family BELYTIDÆ.

##### *Scorpioteleia mirabilis* Ashm.

Ashmead, *Canad. Entom.*, Vol. 29, p. 53 (1897).

Orcas Island, San Juan, Co., Wash. This most extraordinary genus was first described from Ottawa, Canada, and I have collected it also at Milwaukee, Wisconsin.

##### *Ismarus nevadensis* Kieff.

Kieffer, *Berliner Entom. Zeitschr.*, Vol. 50, p. 276 (1905).

There is a single specimen of this species recently described by Kieffer from Nevada. It was collected on one of the islands

in Puget Sound during July, 1908. The genus occurs also in Europe, but so far has not been detected in the Eastern United States.

***Belyta rostrata* Harr.**

Harrington, Trans. Royal Soc. Canada, Section 4, p. 196 (1899).

There is a male from Mount Constitution, Orcas Island, which I think, without doubt, is cospecific with the male described by Harrington from Quebec as *Belyta rostrata*.

There are at least six other species of Belytidæ from the Puget Sound region, but owing to the almost chaotic condition of many of the genera of this family I have not been able to identify them satisfactorily.

Family DIAPRIIDÆ.

***Trichopria* sp.**

There is a male, probably representing an undescribed species in this genus, collected on the slope of Mount Constitution on Orcas Island, in Puget Sound.

Family CERAPHRONIDÆ.

***Ceraphron glabricornis* Kieff.**

Kieffer, Berliner Entom. Zeitschr., Vol., 50, p. 260 (1905).

This species was originally described from specimens taken at Ormsby, Nevada. There is one specimen from Mount Constitution, on Orcas Island, San Juan Co., Wash.

***Megaspilus ottawensis* Ashm.**

Ashmead, Canadian Entom., Vol. 20, p. 149 (1888).

Ashmead, Bull. U. S. N. M., No. 45, p. 117 (1893).

Harrington, Trans. Royal Soc. Canada, Sec. 4, p. 178 (1889).

I have seen two female specimens which appear identical with others that I have taken, at Woods Hole, Mass., on the Atlantic Coast. The species thus evidently extends entirely across the continent.

***Megaspilus orcasensis* sp. nov.**

Male. Length 2 mm. Entirely black, except the legs including the coxæ, which are brownish yellow. Head nearly twice as broad as thick, its surface shagreened and semi-opaque except for a small rounded



polished median spot just above the base of the antennæ; above the ocelli with a short median impressed line. Eyes oval, nearly circular in outline, pubescent. Ocelli in a triangle, the lateral ones slightly nearer to the eye margin than to the median ocellus. Mandibles and palpi pale brownish. Antennæ 11-jointed, as long as the body and gradually becoming more slender toward the apex. Scape three times as long as thick at the apex, slightly curved; pedicel minute, obovate; first flagellar joint four times as long as thick, all the following joints including the last more slender and very slightly shorter. Mesonotum elongate, slightly narrowed anteriorly, its surface shagreened and subopaque; with three furrows which converge posteriorly and meet an impressed line at the posterior margin; axillæ barely meeting medially. Scutellum nearly as long as the mesonotum, narrow, convex; its surface shagreened. Metathorax very short, rugose. Pleuræ nearly smooth; the mesopleura anteriorly with a row of large punctures. Abdomen somewhat longer than the thorax; slightly convex above, but strongly so below when seen in profile. First segment rugose, extremely short; second twice as long as the remaining ones together; with a raised basal rim or margin and a series of short basal longitudinal striæ; following all very short; apical projecting appendage yellow. Legs brownish-yellow; the coxæ and the anterior legs lighter than the four posterior legs which are more nearly rufous. Wings infuscated, stigma piceous; two-thirds as long as the radial vein.

One specimen from one of the islands in Puget Sound, Wash., collected during July, 1908.

The species is distinguished from others in our fauna by the subopaque body, nearly equal flagellar joints and the color of the legs with lighter coxæ.

***Lygocerus constrictus* sp. nov.**

Male. Length 1.2—1.4. mm. Black, the legs except the basal part of the coxæ brownish yellow; wings slightly infuscated. Head strongly transverse, nearly three times as wide as thick; front subshining, faintly punctate. Eyes nearly circular in outline, faintly pubescent. Ocelli in a broad triangle, the lateral ones equally distant from the eye-margin and the median ocellus. Face strongly convex centrally. Mandibles piceous, palpi pale brown. Antennæ 11-jointed, entirely black except the extreme base of the scape which is pale. Scape elongate, slender, about four times as long as thick; pedicel

small; first seven flagellar joints with long sparse black hairs and dentate at the outer apical angle; the base of each constricted to a very thin pedicel which is as long as the joints near the base, but gradually grows shorter to the seventh joint after which it is not present. First flagellar joint scarcely twice as long as thick; second to fourth about quadrate; fifth one-half longer than thick; sixth twice as long as thick; following becoming more elongated. Mesonotum about as broad as long and scarcely narrowed in front; its surface subopaque and faintly punctulate; with three furrows which converge toward the posterior margin where they meet the narrow impressed line at the base of the axillæ. Axillæ meeting narrowly on the median line. Scutellum broad, not very strongly convex. Metathorax very short rugose. Pleuræ smooth, polished; mesopleura with a curved series of punctures at its upper anterior angle. Abdomen as long as the thorax, more strongly convex below than above; petiole very short; second segment occupying nearly two-thirds of the surface of the abdomen, basally with a raised rim or margin and an extremely short series of basal pits or striæ. Apical segments all very short; tip of abdomen piceous. Legs brownish yellow, the posterior coxæ infuscated except at their tips. Wings nearly hyaline, stigma fuscous, oval; two thirds as long as the radial vein.

Three specimens, two from the slope of Mount Constitution and the other from one of the islands in Puget Sound, without more definite data.

The present species appears to be most closely related to *L. picipes*, but differs decidedly from a male of this species which I have from the East, by its much more strongly dentate antennæ.

The following table will aid in separating the North American species of *Lygocerus*.

#### KEY TO THE SPECIES OF LYGOCERUS.

1.	Males .....	2
	Females .....	9
2.	Antennæ with the first seven joints ramose; legs entirely reddish yellow.....	<i>floridanus</i> Ashm.
	Antennæ serrate or toothed on the basal joints.....	3
3.	Flagellar joints, 1-5 or 6 dentate.....	4
	Flagellar joints, 1-7 dentate.....	8

4. Legs, including coxæ yellow.....**pallipes**, Harrington.  
Legs, black or brown in great part..... 5
5. First flagellar joint twice as long as thick.....**stigmatus** Say.
5. First flagellar joint scarcely as long as thick..... 6
6. Stigmal vein distinctly longer than the stigma..... 7  
Stigmal vein not longer than the stigma.....**californicus** Ashm.
7. Sixth flagellar joint dentate.....**6-dentatus** Ashm.  
Sixth flagellar joint not dentate.....**picipes** Ashm.
8. First flagellar joint  $2\frac{1}{2}$  times as long as thick....**niger** Howard.  
First flagellar joint scarcely twice as long as thick.  
**constrictus** Brues.
9. Legs, including all coxæ, reddish yellow.....**floridanus** Ashm.  
Legs in part, or at least the hind coxæ black..... 10
10. Pedicel as long or longer than the first flagellar joint..... 11  
Pedicel distinctly shorter than the first flagellar joint..... 13
11. Antennæ entirely black or brown..... 12  
Antennæ black, scape brownish yellow below; legs pale  
brownish .....**picipes** Ashm.
12. Legs black, lighter on the knees, anterior tibiæ and all tarsi.  
**stigmatus** Say.  
Legs brownish yellow.....**6-dentatus** Ashm.
13. Legs including coxæ, yellow.....**pallipes** Harrington.  
At least the coxæ black..... 14
14. Legs except coxæ, brownish yellow.....**pacificus** Ashm.  
Legs of prevailing black color..... 15
15. Scape of antennæ as long as the three following joints taken  
together .....**alaskensis** Ashm.  
Scape longer than the three following joints.....**niger** Howard.

#### Family SCELIONIDÆ.

##### **Telenomus heracleicola** Brues.

Brues, Bull. Wisconsin Nat. Hist. Soc., Vol. 4, p. 148 (1906).

Pullman, Wash. This is the type locality.

##### **Hoplogryon tenuicornis** Kieff.

Kieffer, Berliner Entom. Zeitschr, Vol. 50, p. 263 (1905).

There are two specimens, one from Mount Constitution on Orcas Island, and the other from one of the other islands in Puget

Sound, which apparently belong to this species, originally described from Nevada.

**Sparaison nigrum** Ashm.

Ashmead, Bull. U. S. N. M., No. 45, p. 238 (1893).

"Washington." Ashmead cites Nevada and Washington as type localities, without further data.